

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 2 and 8 in accordance with the following:

1. (CURRENTLY AMENDED) A wavelength division multiplexed (WDM) network system, comprising:

an optical WDM transmission path;

a plurality of sub-networks, each having an IP address and accommodating a client; and

a plurality of WDM nodes, each corresponding to each of the plurality of sub-networks ~~respectively~~ and connected with the optical wavelength division multiplexed transmission path, wherein each of the plurality of WDM nodes comprises:

a wavelength converting unit controlling oscillation frequencies in conformity with an IP address of a destination sub-network, and

a cross-connecting unit for cross-connecting a route directed to an adjacent WDM node ~~for connecting~~ to communicate with the destination sub-network.

2. (PREVIOUSLY PRESENTED) The WDM network system according to claim 1, wherein:

each of the WDM nodes includes a routing table storing the IP address of the corresponding sub-network, a WDM node of an upper order of the sub-network, a cross-connection ID identifying the path, a wavelength used and information of the WDM node to which the main signal is first sent when reaching the target sub-network using a predetermined path, and wherein

the control of the oscillation frequency by the wavelength converting unit and the cross-connecting of the route are conducted by referring to the routing table.

3. (PREVIOUSLY PRESENTED) The WDM network system according to claim 2, wherein:

when an IP address of a sub-network in which a client is accommodated is notified from the client issuing a request for connection, the corresponding node registers the IP address of the sub-net work into the routing table, and

each WDM node exchanges the IP address information of the sub-network retained in the routing table with adjacent nodes.

4. (PREVIOUSLY PRESENTED) The WDM network system according to claim 1, wherein:

the oscillation of wavelengths and the settings of cross-connection are started/ended and defined/erased in response to the occurrence/disappearance of traffic from the sub-network.

5. (PREVIOUSLY PRESENTED) The WDM network system according to claim 1, wherein:

the wavelength converting unit executes one-to-multiple communication by converting a wavelength into a plurality of wavelengths in response to a request for connection from one client.

6. (PREVIOUSLY PRESENTED) The WDM network system according to claim 2, wherein:

a plurality of selectable paths are set in a cross-connection ID identifying the path of the routing table, with the priority being registered for each path.

7. (PREVIOUSLY PRESENTED) The WDM network system according to claim 6, wherein:

the priority is set based on the quality of the WDM signal at the receiving terminal and can be updated in response to disconnection or recovery of the path.

8. (CURRENTLY AMENDED) A WDM node, a plurality of which each corresponding to a plurality of sub-networks and connected to optical wavelength division multiplexed (WDM) transmission paths in a WDM network system for connecting the plurality of sub-networks each

having an IP address and accommodating clients, through the optical wavelength division multiplexed transmission paths, the WDM node comprising:

a wavelength converting unit controlling an oscillation frequency in conformity with an IP address of a destination sub-network; and
a cross-connecting unit for cross-connecting a route directed to an adjacent WDM node ~~for connecting to communicate~~ with the destination sub-network.

9. (PREVIOUSLY PRESENTED) The WDM node according to claim 8, further comprising:

a routing table for storing the IP address of the corresponding sub-network, a WDM node of an upper order of the sub-network, a cross-connection ID identifying the path, a wavelength used and information of the EDM node to which the main signal is first sent when reaching the target sub-network using a predetermined path, and wherein
the control of the oscillation frequency by the wavelength converting unit and the cross-connecting of the route are conducted by referring to the routing table.

10. (PREVIOUSLY PRESENTED) The WDM node according to claim 9, wherein:
when an IP address of a sub-network in which a client is accommodated is notified from the client issuing a request for connection, the WDM node registers the IP address of the sub-network into the routing table, and
the WDM node exchanges the IP address information of the sub-network retained in the routing table with adjacent nodes.

11. (PREVIOUSLY PRESENTED) The WDM node according to claim 8, wherein:
the wavelength converting unit executes one-to-multiple communication by converting a wavelength into a plurality of wavelengths in response to a request for connection from one client.

12. (PREVIOUSLY PRESENTED) The WDM node according to claim 8, wherein:
the oscillation of wavelengths and the settings of cross-connection are started/ended and defined/erased in response to the occurrence/disappearance of traffic from the sub-network.

13. (PREVIOUSLY PRESENTED) The WDM node according to claim 9, wherein:
a plurality of selectable paths are set in a cross-connection ID identifying the path
of the routing table, with the priority being registered for each path.

14. (PREVIOUSLY PRESENTED) The WDM node according to claim 13, wherein:
the priority is set based on the quality of the WDM signal at the receiving terminal
and can be updated in response to disconnection or recovery of the path.